AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Canceled)

2. (Currently Amended) A method for converting a halftone image having a halftone value for each of a plurality of pixels, into a reconstructed image which for each of said pixels takes on one of more than two possible values, comprising the following steps:

representing a halftone image as a plurality of individual pixel values, where each pixel value represents a physical attribute of the image at a corresponding location in the image;

for successive individual pixels:

defining a set of neighborhood pixels of the individual pixel, the set of neighborhood pixels including the individual pixel and additionally a plurality of pixels proximate said individual pixel;

deriving for each pixel of the neighborhood, a significance coefficient that is based upon the value of that pixel, by deriving a baseline value for the individual pixel that is obtained by low pass filtering of the halftone image, and deriving said significance coefficient as a decreasing function $f(v)$ of the absolute difference (v)

between the halftone value at the neighborhood pixel and the

baseline value for the individual pixel; and

deriving the reconstructed value of the individual pixel as a

sum over the pixels of the neighborhood of a product of the halftone

image value at that neighborhood pixel with the significance

coefficient of that neighborhood pixel; and

reproducing the image from the reconstructed values of the individual pixels.

3. (Previously Presented) A method according to claim 2 in which said

halftone image is derived from an original image having a continuous value for each

pixel, and, for each individual pixel, said significance coefficient of each

neighborhood pixel is an indication of the likelihood that the value of that

neighborhood pixel in the original image is correlated with the value of the individual

pixel in the original image.

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Currently Amended) A method according to claim [[6]] 2 in which f(v) is a

non-linear function.

8. (Currently Amended) A method according to claim [[6]] 2 in which f(v) is a continuous function.

9. (Original) A method according to claim 8 in which f(v) is a function of the form f(v)= a(1-v/b)^k where a and b are predefined numbers and k is a predefined integer.

10. (Canceled)

11. (Original) A method according to claim 2 comprising a further step of forming an enhanced reconstructed image as a linear combination of said reconstructed image and a continuous image derived from said halftone image by a second image reconstruction method.

12. (Original) A method according to claim 11 in which said second image reconstruction method is a low pass filter.

13. - 18. (Canceled)

19. (Original) A computer program product which is readable by a computing device to cause the computing device to perform a method according to claim 2.

20. - 22. (Canceled)